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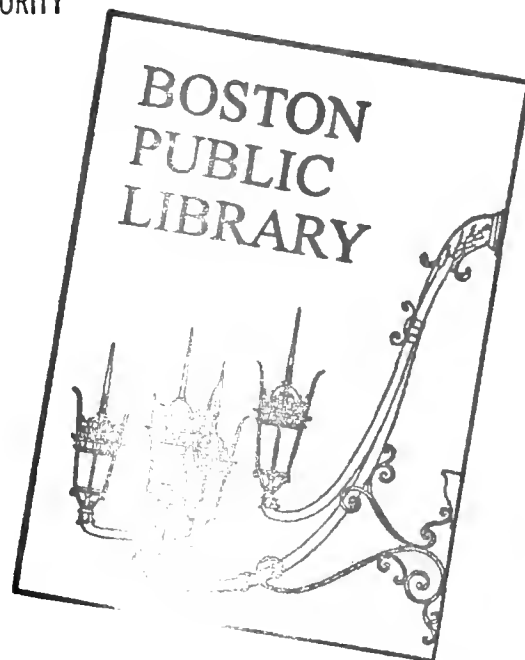


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PRELIMINARY SUMMARY REPORT

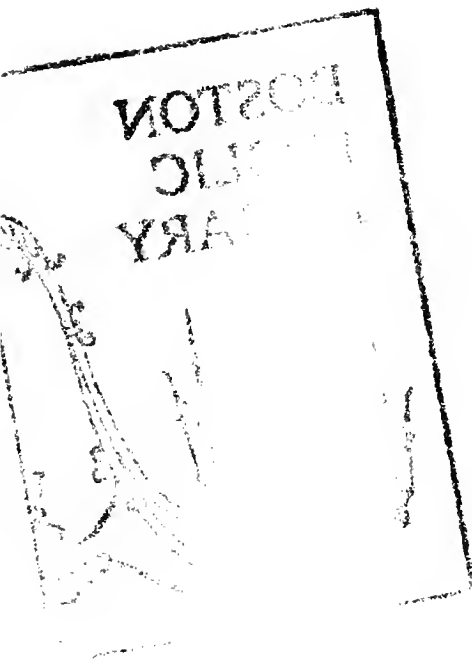
1976 INTERNATIONAL EXHIBITION
AND NEW COMMUNITY

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PRELIMINARY SUMMARY REPORT
UNITED STATES BICENTENNIAL WORLD EXPOSITION AND NEW COMMUNITY
BOSTON 1976

I INTRODUCTION

IA History of World Expositions

Since their inception in the nineteenth century, international expositions have evolved from a single large hall into vast urban complexes. The most successful have understood the problems and opportunities of their time and have molded the two into a statement and a direction for the future. Many have left behind a permanent legacy in the form of significant and lasting municipal, social and technological improvements.

The first international exposition, in London in 1851, was a prophetic experiment in exposition design and planning. Its great Crystal Palace was constructed of prefabricated steel and glass for economy, expediency and flexibility. Within the simple structural framework of its single building, an unlimited number and variety of exhibits were accommodated, thus emphasizing content over container. Finally and perhaps most importantly, its great interior spaces brought together for the first time in history, all classes of English society and visitors from other nations for a common purpose and laid a foundation for future European cooperation and social equality in England. In 1889, Paris' celebration incorporating the latest design and engineering techniques became the first to integrate separate buildings into a single urban complex and left the city a permanent legacy in the Eiffel Tower. Subsequent development on the same site for the 1937 Exposition demonstrated the potential of the exposition as a generator of urban form. The banks of the Seine, crossing the axis of the Eiffel Tower, were lined with buildings and pedestrian ways calculated to anticipate development and direct its growth. In Chicago in 1893 impressive innovations in design and planning controls resulted in a coherent, balanced

though asymmetric plan that was visually harmonious, architecturally unified and understandable.

The pervasive trend of recent expositions has been toward more universal and thematic content versus individual exhibitionism and toward permanent reuse versus inflexible single use of temporary facilities. Seattle's 1962 program provided permanent structures and the site for a 72 acre urban civic center. Most recently, Expo 67 left Montreal a modern transportation system, an island complex with permanent housing and inaugurated the sophisticated use of advanced audio and visual devices to explore the universal implications of "Man and His World." The coming Osaka Exposition promises further advances with provision of a theme to reconcile "Progress and Harmony for Mankind," a major structure as a framework for theme exhibits, on-site housing and greater integration of audio-visual communication techniques as a means of extending the experience of the participant.

IB Future of World Expositions

As expositions of the recent past have moved toward the more universal concerns of mankind and toward more practically useful facilities, those of the future can become even more potent agents for social, technological and cultural betterment of life. As the narrow concerns of trade, commercialism and self-assertion become secondary to the more pressing and common problems of hunger, oppression and ignorance, the stage is set for the first international exposition devoted to the realization of the goal of interdependence between men of all nations.

The bicentennial celebration of the United States of America provides a fitting context for the exploration of mankind's universal aspirations. The Declaration of Independence of 1776 inspired a goal that has resulted today in less than two per cent of the world's population living in territories officially termed "dependent." The commemoration of that independence need not be a preoccupation with past accomplishments but rather the investigation, as host to the world, of their implications for the future. Our independence has been democratic and magnanimous and has led to a search for international order, peace and cooperation. By identifying itself with the larger goals of mankind in a Declaration of Interdependence, the celebration can become a more meaningful expression of the world as we find

it today.

The United States with its typically American approach could marshal the massive resources of money, technology and research necessary to provide the initiative for an interdependent search for solutions to the problems of our increasingly urban world. Consistent with the historic significance of the occasion, special emphasis would be placed on the evolution of the American city and the contribution and assimilation of its great mixture of racial, ethnic and national groups and the yet unfulfilled role of still other minorities. The exposition could herald the re-emergence of the city as the highest attainment in human culture and society.

IC Objectives of the United States Bicentennial World Exposition and New Community, Boston 1976

The International Exposition will be many things to many people at many different levels. The overriding objectives are to provide a framework for international interdependence to seek solutions to man's most common and fundamental urban problems, a working laboratory to test and evaluate solutions to urban problems and, finally, a prototypical new urban community.

IC1 Interdependent International Search for Solutions to Common Problems: Communication, Participation and Coordination

Social communication has lagged behind our technical ability to communicate happenings all over the world instantaneously. Regardless of language, we are still unable to clearly communicate our precise thoughts or intentions to others. The Exposition will explore new forms of social communication through the most advanced technology to solve what may be one of our greatest remaining problems.

Coming together of people for participation in common activity and endeavor is more relevant today than traveling to a particular location to see what can be communicated by technical media. Through the functions of living, working, studying and playing the process of participation will be generated within the Exposition. The individual will be an integral part of the Exposition, rather than an observer, experiencing the living patterns of this new urban environment and of the future new community.

Because of modern communications technology we can no longer claim ignorance of the problems of the world. We know that many of these problems, including, food, water, medicine and housing could be solved if resources of research, knowledge and money could be coordinated. The program and physical structure of the Exposition will provide a framework for coordination in which the smallest endeavor can contribute to the largest in a total integrated effort to reach for answers at all scales.

Individual program centers will be established to deal with specific problems and opportunities in the fields of Education, Recreation, Conservation, Identity, Health and Mobility. These will provide both the organizational and physical means of communicating ideas and concepts, participating in solutions and coordinating efforts.

IC2 Urban Laboratory

By the year 2000, world population will have doubled and most people will be living in urban centers. Problems of the physical environment must be solved before that time. The Exposition will be a laboratory for developing concepts of housing, transportation, open space and public services that transcend practical sufficiency by responding to human social and psychological needs as well. New educational and recreational programs will extend the horizons not only of the school aged but of the public as a whole.

IC3 Prototype New Urban Community

The basic program and framework of the celebration and exposition has been designed to provide a nucleus for a new community that will give direction to future growth of Boston. Structures as well as program elements will be designed for re-use, reducing the cost of the exposition and emphasizing the program over the container itself.

II LOCATION AND SITE

The location of the site for the Exposition has important implications and advantages from an international as well as from a national and local

standpoint. Generally, the site for the Exposition is proximate to major world transportation and movement corridors, part of a highly developed urban-industrial center and fairly typical of such centers around the world.

- IIA Boston is located on numerous international air and water transportation routes and has excellent rail and air connections with the rest of the Atlantic Urban Region and nation. The region's cultural, intellectual and technological resources are among the best in the world. Its physical environment, while possessing many natural advantages, faces all of the urban problems of pollution, traffic congestion, urban sprawl and physical decay that typify the cities of America and the world.
- IIB From a national point of view Boston has an additional advantage in relation to the bicentennial celebration of being one of the thirteen original colonies of the United States and having been the scene of perhaps the greatest number of pre-Revolutionary and war-time activities and events. The city and region abound with historic buildings, sites, monuments and memorabilia of that era and of the preceding 200 years of exploration and colonization. Boston has also been a center of national attention and emulation as one of the leading federal urban renewal cities. Many renewal activities undertaken in the early 1960's are nearing completion and will be followed by even more extensive and sophisticated programs prior to 1976.

Of particular note with respect to urbanization is Boston's harbor, the site of the Exposition. New methods of making land or building over water, consistent with conservation of natural processes of the site and dependent areas, and the integration of new systems of water transport will hold important implications for other major cities, most of which are located on bodies of water and face an acute shortage of land needed for urban expansion. This condition is especially prevalent in the United States, where advanced transportation technology has encouraged and facilitated the uncontrolled sprawl of city into suburb.

- IIC In relation to regional, state and local objectives, the site has even more immediate and concrete advantages. Located within minutes of the down-

town regional core, the Exposition and New Community would have rapid transit, water and surface street connections to the core and other parts of the city and region. Covering portions of Boston's shore line at Columbia Point, Dorchester Bay, and to a limited extent the 130 acre Thompson Island, the site comprises 515 acres of existing and made land. It is not a suburban site but a direct extension of the existing city. Because it is part of the city, the site has an enormous potential to solve many of Boston's most immediate and pressing problems and to offer a genuine alternative way of life to the city dweller. Through the Exposition and New Community new in-town housing, desperately required by the poor and increasingly preferred by many in the middle and upper income groups, will be provided in quantity. The neglected shore line and polluted waters of the harbor will be reclaimed to provide an increased variety and intensity of urban recreation opportunity. New industry, commerce and services with attendant employment opportunities will increase the flagging economic viability of the city.

Anticipating and directing a logical pattern of regional growth, the site will become one of several satellite cores ringing the central regional core. Connections to the core and other sub-cores, such as Dudley, Andrew, Kenmore and Harvard Squares, by new and existing forms of mass transit, vehicular circulation, open space corridors and remote communication centers will be a means of regenerating other parts of Boston's environment as well as more directly relating and integrating the new and the old.

This sub-core will become a focus for future development to the east, incorporating the harbor islands, the north and west and the South Shore. By the year 2000, the New Community core will serve a surrounding population of 200,000. Its unique marine environment, a major employment base in the field of education and its recreational amenity, with increased accessibility to the shore and islands, will make it a vital part of the city a major asset to the region.

The site development program is the result of the particular logic of the site, respecting the dictates of topography, land form, patterns of development and circulation and the inherent potential for future development. In this respect it provides an opportunity and a challenge to coordinated local, regional and national objectives for conservation, development and

the creation of greater social and economic opportunity for all of our citizens.

III FRAMEWORKS

To be successful and to accomplish its objectives, the Exposition must provide a framework of constants to order and relate the many variables that will comprise the total event and its end product. The framework must be able to accommodate a variety of options within the limitations imposed by the basic objectives of the program.

IIIA The conceptual framework, as previously discussed, is to provide a vehicle for exploring and solving common problems in an urbanizing world, a laboratory for testing and evaluating solutions and a new community to demonstrate the highest potential for urban living; as an appropriate means of celebrating the bicentennial of the nation. The critical elements of the conceptual framework then are:

1. The Program for Interdependence through Communication, Participation and coordination.
2. The Themes (or areas of research) related to the major categories of international problems.
3. The Urban Laboratory, and
4. The New Community

IIIB1 The physical framework of the Exposition has three primary objectives: to provide a three dimensional ordering framework to accommodate the Exposition program, facilitate total re-use of structures, components and systems and to provide the nucleus for a new community. It must further respect the inherent qualities and ecological needs of the site consistent with its potential for development.

IIIB2 The critical elements of the physical framework are: a strong focal center or core, decentralized sub-cores for related but specialized activities,

internal transit connections between cores (linear or continuous loop), integration of site with city and region by transit, automated and free vehicular traffic and water transit via parking and transit interchanges, and a system of remote exposition centers throughout the world.

The framework must be flexible enough to allow adaptation of infill areas to suit the need or specialized purposes of the individual exhibitor while preserving the overall continuity and organization of the framework.

All elements are designed for re-use in the New Community or as new elements in Boston or as prototypes for any city. To accommodate the New Community the physical framework must be able to respond to the need of the individual to shape his own environment and express his own identity. It must exploit the positive potential of the environment to provide opportunities for creative recreation, social communication and for the integration of recreation and education with other daily activities in response to increased leisure time. Finally, it must provide a social, economic and physical focus for the New Community and future development of the South Shore and harbor islands.

- IIIC The objectives of the social framework of the Exposition and New Community are to provide greater opportunity for social communication and participation and, on the other hand, individual identity and privacy, by providing a greater diversity of choice within both the public and private environments.

To provide a real alternative to the problems of urban living today, the framework will exploit the positive potential of the environment to provide more enjoyable social experience, recreation and educational opportunity.

A system of open and public spaces, facilities and programs will expand the range of participation in community living and leisure activities.

Greater emphasis on flexibility within the private sector will enable each individual to shape and identify with his own environment. In contrast with the traditional attitude of practical necessity and expediency, toward the function of the urban environment, the New Community will demonstrate how cities of the future can be more healthy and enjoyable places in which to live.

IVA EXPOSITION PLAN

Past expositions have failed to communicate directly with a significant segment of the world's population. The Boston Exposition will be, in a sense, composed of Information/Communication Centers distributed throughout the United States and the world. With Exposition Central in Boston as a focus, for receiving, processing, distribution, storing and displaying information, local sub-centers will serve as focal points for local celebrations and displays related to the Bicentennial and Exposition Program while communicating these events to Exposition Central. The dispersed centers will provide an international network of communication linking all parts of the world, from regional centers and national capitals to remote hamlets and urban communities.

IVB Exposition Central in Boston Harbor is the product of the program requirements, the character and limitations of its site and the framework criteria. Two alternative plans have emerged from the many examined which best meet these requirements.

Alternative 1 is preferred from the standpoint of its regional context, growth potential and for its ability to realize the full potential for site development. A large part of this plan falls within the political boundaries of the city of Quincy, however, and may present political difficulties in coordinating planning objectives between the two cities. This alternative provides an opportunity, as well as a challenge, to confront and resolve one of the most crucial issues facing every American central city: the reconciliation of city and suburban goals and priorities.

Basically, Alternative 1 is in the form of a large square with an open center of water. The major theme structures, entrances, parking terminals, transportation interchanges and administrative and service areas are located on the corners of the square. At the southwest corner (at Savin Hill) is a great Water Plaza and three of the theme structures. This is the focal center of the Exposition and New Community as well as for existing and future development to the south and west. Theme pavilions on the other three corners generate sub-centers of

activity at Columbia Point, Quincy and Thompson Island. Between the corners are additional exhibition areas that will be converted to New Community housing as well as a major educational institution. Exposition housing of various kinds is located adjacent to each corner or sub-center. All points of the plan are connected by a secondary continuous transit loop.

Alternative 2 meets all of the requirements of program, site and framework criteria. This plan falls entirely within the limits of the city of Boston, thereby avoiding the problems inherent in Alternative 1. At the same time it falls short of realizing the highest potential of the site and has a less positive effect on overall metropolitan area development.

The plan for Alternative 2 is in the form of a cross, with the major activity and focal center at its crossing. Theme structures, entrances, parking terminals, transportation interchanges, administration and service areas are located on four points of the cross and at the center. The center, located at Columbia Point, also contains the Water Plaza and three theme pavilions. Other theme pavilions or sub-centers are at Savin Hill, Thompson Island and near Columbus Circle. Between the points and the center are additional exhibition areas that will be converted to New Community housing and a major educational institution. Exposition housing is concentrated north and west of the center and Savin Hill, with special vacation housing on Thompson Island. Rather than a continuous loop, transit will consist of two shuttle lines between opposite points of the cross with an interchange between them located at the center.

- IVC1 The Exposition core will contain the highest intensity of land use and concentration of activity of all kinds. Three main theme pavilions and a variety of related spaces for exhibits, entertainment, services and amusements will provide a three-dimensional framework where many exhibitors will exhibit simultaneously, separated horizontally and vertically by public spaces. Core pavilions will be devoted to the themes of Mobility, Conservation and Health. Individual participants will be able to take part in programs related to each of the categories depending on interest and ability to contribute in a general or specific way.

Planning and design of Theme Pavilions will have to await development by participants and exhibition designers. It is easy to imagine however, the way in which one might evolve. A major space in the center of the pavilion - covered with a vast skylight and capable of handling approximately 800 visitors at a time or between 20 and 25,000 per day - would provide a generalized summation of developments in a specific category: for instance, education. Three-dimensional electronic projection, such as in the hologram, would simulate historical developments in education related to the Bicentennial observation, while simultaneously depicting concurrent conditions in all parts of the world. The end of the presentation would be a projection in time, based on intelligence generated by all participants, showing how education might occur in a new world of national, and cultural interdependence.

In other major spaces smaller numbers of visitors would explore sub-categories of the theme such as philosophy, religion, or the sciences, through other media. These would be developed in a variety of ways: as theatres and auditoriums for film and slide presentations, live theatre, performing arts and lectures by world figures; as forums and assembly halls where by closed circuit television and multi-lingual communication systems, all participants could be involved in discussion in a face-to-face relationship; and finally, as giant exhibition halls where ideas, concepts and facts might be displayed by multi-media, to invite comment and interaction by visitors.

Meanwhile throughout the pavilion, ranged over as many as sixteen levels, hundreds of exhibits (up to 1000) would occur simultaneously. Sponsored by governments, international organizations of all kinds, industry, foundations, citizen groups, and educational institutions, these exhibits would provide the widest range of participation. Informal conversations, dramatic presentations, manipulatable education models, computerized information retrieval banks, and televised happenings around the world would occur in spaces ranging from ten foot cubicles to a great exhibition hall. Media used by exhibitors to convey information will include virtually every technique known today and many that are now in research and developmental stages. For the first time

in history, hundreds of participants will combine efforts toward a common goal: communication, rather than diffusing and duplicating efforts to convey much the same information in a variety of forms. At the same time by emphasizing the distinct qualities of different cultures in their approach to similar problems, the exhibits will strengthen the quality of diversity that enhances the lives and experience of all men.

Because of the flexibility of the basic framework, exhibition spaces will vary not only in content but in size and shape. Limitations will be imposed only by the structural and mechanical systems and the circulation spaces that order both the visual and physical function of the pavilion as a whole. These open and public spaces integrate movement, visual experience and participation in the various exhibits and the program. Mechanical devices such as escalators, moving sidewalks, and passenger modules will expedite movement while courts, terraces, nooks and a variety of services such as restaurants, nurseries, and lounges will provide respite from the intense activity of the Exposition. It will be possible to sit, in a rough equivalent to a sidewalk cafe, high in the workings of the pavilion overlooking the Great Space. One hundred-fifty feet below, people will be seen moving to and fro. Across the space, tiers of exhibitions, concessions and pedestrian ways will be alive with movement, graphics and color. It will require an effort of the imagination for the fairgoer to remember that he is still in the twentieth century.

The core will also be the location of most movement into and through the Exposition. Primary rapid transit and water transit from downtown Boston, and private vehicles and boats from all points will arrive at the Water Plaza. There the visitor will be able to board the secondary loop or cross transit line for a quick overview of the entire site, or plunge directly into the working exposition in one of the theme buildings. Numerous pedestrian ways and mechanical movement systems will carry people through the core and its structures. The broad ground level Explanade around the Water Plaza, with theme and exhibition structures on one side and a variety of water related activities, amusements, restaurants, services and special events on the other, will be a major pedestrian concourse. Other pedestrian ways will occur at ground level and above ground. A variety

of moving sidewalks, elevators, escalators, moving chairs, electri-cabs, and other mechanical devices will enhance pedestrian comfort and enjoyment and expedite the movement of large numbers of people. The character of broad pedestrian ways, buildings and people surrounding the broad plaza of water, filled with boats of every size and description will evoke images of a modern day Venice or Amsterdam.

IVC2 The three sub-cores of the Exposition will be similar in function to the Water Plaza. Served by secondary rather than primary rapid transit, they will be the point of arrival for visitors coming by private automobile, water transit and boat, with parking interchanges at two locations and a major marina complex at the third. At Thompson Island the theme pavilion will explore the potential for new and creative forms of recreation to make man's increasing leisure time more meaningful. The problem of conserving the world's resources and their social and psychological values, will be the subject of the investigations and exhibits at the Quincy or Columbia Point theme structure. Near the major Exposition housing area at Columbia Point, or at Columbia Circle in Alternate 2, the need for individual expression and identity, on all levels, in a world of increasingly universal standards will be presented together with ways in which they can be achieved.

As in the core, a variety of pedestrian ways, tertiary transit and mechanical devices will facilitate movement and provide a choice in the means of participation. These areas will also contain a diversity of services, amusements and amenities. Major facilities will be adjacent to some of the sub-core, such as a major educational institution at Savin Hill and a regional park and recreation center on Thompson Island.

IVC3 In between the cores will be floating and platform areas where less highly structured activities of the Exposition would occur. Here an overall framework of transportation, circulation and service elements, together with a flexible system of modular building components, will allow exhibitors to express their own ideas within an overall order. The components will be re-used in different ways after the Exposition. Major activities would include non-thematic exhibits, entertainment, amusements and a variety

of water activities. A major educational center is planned between the north and west corners.

- IVC4 A large part of the Exposition will consist of 9,000 New Community housing units located on various parts of the site. These units will be subdivided into 18,000 apartment size units during the Exposition to accommodate 40,000 people at a time. Visitors will be able to participate more fully in the Exposition program while actually using and experiencing all of the facilities, amenities and living patterns of the New Community.

Exposition housing will be an important part of the Urban Laboratory program. An overall public framework will contain, order and support a great diversity of private infill of dwelling units and related facilities. A variety of housing types at different densities will demonstrate and test new potentials for urban living from a social and psychological standpoint as well as that of technological innovation. Individual units will be designed to meet the requirements of different life styles, age groups, family sizes, and income levels. Private open space, gardens and terraces, grade separation and flexibility of interior arrangement and furnishing will provide privacy and a sense of individual and group identity, while the public framework will increase the range of choice, participation and social communication.

This expanded public framework is both a cause and effect of the concentration of people and activities typically found in the city. By exploiting the positive potential of its compactness to provide maximum diversity of social and physical amenity, the framework will generate a sense of relatedness and community and become the focus of public life of the New Community. Consisting primarily of open space and circulation systems, building structures and utilities, the framework will accommodate a wide range of public and semi-public functions, activities and institutions including, recreation, education, transportation, government, commerce, health, welfare, entertainment and culture.

- IVC5 The last major part of the Exposition is Thompson Island. In addition to a 130 acre natural park, the island will provide many facilities designed to extend the range - in time, numbers and variety - of recreational

opportunity for the visitor and resident. Major facilities of the island complex include: the Exposition Recreation Theme Center and Marine Research Institution, a 500 boat Marina with Resort Hotel, condominium apartments and a variety of other overnight accommodations, a Public Boat Club and an Island Information Center. On the southern end of the island, set among grassy knolls, woods, winding trails and beaches, will be a 384,000 square foot Transparent Dome to allow use of the park for picnicking and other outdoor activities during inclement weather or in winter, a year round Recreation and Entertainment Garden, and a Museum of Exploration and Navigation. On the island crest the former Thompson Academy will be converted into a Youth Camp and Demonstration Farm to acquaint urban young people with the world of nature and growing things. Three circulation systems will make the resources of the island accessible to the largest numbers while preserving the peace and tranquility of its pastoral environment. A special tertiary transit line will connect the theme pavilion (and secondary transit) with the marina, information center, dome and amusement garden but will terminate there in favor of a web of foot trails that criss cross the island from end to end. Finally visitors will be able to rent a boat, bicycle or electric car (individual transit modules) for the boating lagoon and a system of vehicular ways that will double as service roads for maintenance and supply vehicles.

By developing new activities and facilities that reflect a more positive attitude toward the educational, social and creative potential of leisure time activity, the Thompson Island complex will open many new avenues for every age, income and educational level.

IV6 Exposition Transit

The Exposition and New Community provide an opportunity for research and development of new movement systems and significant improvement of existing systems. The Urban Laboratory will test the validity of a flexible public framework for movement of persons, goods and services. A primary objective for all movement systems is to optimize the re-use potential of vehicles and pathways after the Exposition for the New Com-

munity, other parts of Boston, and as prototypes for other metropolitan areas.

Design objectives have been established concerning physical characteristics of the hardware governing system efficiency and convenience for the user. Vehicles and flow channels must be efficient, at high and low capacities in order that they be capable of serving multiple functions. The flexibility of a system should be maximized while the required infrastructure should be minimized. The transportation modes should be designed to be convenient, comfortable and unobtrusive. A sufficient degree of choice of mode, speed and route should be offered to both Exposition visitors and residents of the community. The user should have a minimum number of changes of mode on a short or long trip. Entrance and exit into vehicles should be easy and efficient. Where appropriate public and private modes should have views of the Exposition and community. Within the site conflict of vehicular and pedestrian movement should be minimized.

Circulation within the Exposition will be limited to public transit and pedestrian movement, with provisions for servicing during the off hours. Automobiles will be intercepted by a series of multi-level parking garages adjacent to the entrances, and in the housing areas. In all cases parking is contiguous with transit and pedestrian ways, horizontally, vertically or both. Only half of the 24,000 parking spaces provided during the Exposition are needed for the New Community. The remaining spaces will be converted to housing, commercial and other community uses.

During the Exposition 100,000 persons will visit the site each day by mass transit. The primary transit mode will be MBTA rapid transit from downtown Boston. This line will provide one entrance stop during the Exposition with extensions possible for the New Community and existing residential areas to the south. Supplementing land transit by MBTA will be a new system of automated guide ways connecting the site with other parts of the region. Visitors, their automobiles equipped with electronic guidance systems, will be able to "hook on" to guide ways far from Boston and be automatically piloted to the site. A primary harbor system composed of high speed medium capacity hydrofoils will operate

on schedule from locations such as downtown Boston, Logan Airport and other harbor locations. Helicopter service of a parallel nature might be provided if demand warranted. Re-use of these same vehicles for the New Community would consist of altered schedules and use of extra modules for other routes in Boston or other cities.

Secondary, on-site transit will be composed of individual rubber wheel-ed modules of 50 passenger capacity, capable of operating individually or in a train, following a magnetic guidance device on a grooved path-way. The system in this form will be a high capacity, two-way loop system, circling the entire site and connecting all entrances, administration and service points. This automated bus system would be the primary movement device for the Exposition, and would provide a fast excursion through the entire site to give the visitor a general overview. Bus modules would be re-used as free or guided transit modules in the New Community and other parts of the city, operating on the existing street system.

An adjunct of the secondary transit will be high speed, medium capacity, hydrofoils which will visit historic sites in the harbor area. These modules would accommodate 100-200 persons and operate on schedule.

The tertiary movement system, connecting with primary and secondary, consists of a number of different transit modules which will move leisurely through buildings and site giving the viewer the opportunity to enjoy exhibitions without leaving the vehicle. These vehicles, in 25 (group) or 5 (individual) passenger modules, will operate either guided or free depending on location. While moving free they would move at little more than pedestrian speed. Water modules, corresponding in size and function, will supplement the land vehicles. During the Exposition these vehicles would be exclusively public. The re-use of the 25 person modules would be as mini-buses in the New Community and in downtown Boston. The 5 person modules might be sold as private, short range, slow speed modules.

A fourth system of circulation is the pedestrian network. During the Exposition the pedestrian ways will connect all primary, secondary and tertiary termini with all exhibits, dwelling units, open spaces, and ser-

vice facilities. These channels could be used by passenger vehicles traveling at pedestrian speeds and service vehicles during off hours. A system of street furniture and graphics as well as appropriate landscaping would accommodate all fair visitors. In the case of the multi-level theme pavilions, this system would occur at various levels above grade. The pedestrian network would be re-used in the New Community with adjustments in street furniture, graphics and landscaping according to the different capacities and functions.

IVC7 Public open spaces of the Exposition range from tiny children's play lots and sitting places in the housing areas, to broad pedestrian ways and spacious squares in the core. Many gardens, playgrounds, and recreation places serve the needs of various "neighborhoods" within the Exposition, just as the Water Plaza, Thompson Island and other major places serve the entire Exposition, future New Community and Boston region. A hierarchy of these places, together with the movement corridors that connect them, comprise an integrated and interrelated open space system. Planning and design of individual components of the system is based on its location, function, number and type of users and relation to other parts of the system. A series of major corridors and places become a stage for viewing and experiencing the Exposition as a whole, while minor spaces facilitate more detailed exploration and individual involvement. By consciously responding to human needs for order, variety and participation, the open space framework can express and enhance the social aspect of the public environment and make it more enjoyable.

An important part of the public environment of the Exposition, the Environmental Design Program, functions at the smallest scale as the open space system does at the largest. Taken together, the elements of the program - lighting, planting, information and service elements, graphics and street furniture - create an ambience that can be coldly inhuman - as in the automobile-oriented cities of today - or warmly responsive to human social and psychological needs. This program will explore new ways of responding to these needs as well as those of practical necessity through the treatment of the public environment. Environmental Design Elements will be designed for re-use in the New Community and in the existing city where parallel needs exist.

IVD In addition to Exposition Central in Boston, a series of dispersed centers throughout the United States and the world will increase direct participation in the Exposition programs. Actual events occurring in other parts of the world will be broadcast to Exposition Central and vice versa.

The hierarchy of centers will range from those in regional centers and national capitols to urban communities and remote hamlets of less than 5,000 population. Regional centers would be located in major cities such as Boston, Philadelphia, Atlanta, Chicago, Dallas, Denver, Seattle, Los Angeles, London, Cairo and Tokyo. State capitols and other cities of over 100,000 population would be a third level of distribution and would provide an opportunity for state administration and organization. At the smallest, though potentially most important, level of participation will be centers serving urban and rural populations of 4 to 5,000. The exposition could be a powerful means of overcoming the present social, cultural and physical isolation of many such groups. As the focus of the Bicentennial Celebration, the Exposition will receive inputs from the New England Historical region and other parts of the nation where important historical events - such as Western expansion and the admission of the forty-ninth and fiftieth states - took place.

The primary component of the communication system is the Exposition itself where all national and international research and development would be coordinated and information processed and displayed. Other centers would vary in size and content depending on service area and specific needs of its particular location. In national and regional locations, centers would probably be similar to one of the Exposition Theme structures in size and content. Such a structure would be a multi-level building occupying approximately an entire city block and containing a great variety of exhibits, activities and related functions. At the smallest level the center might be a modest structure located in a park or plaza containing electronic equipment capable of broadcasting to and from Exposition Central. All audio-visual devices employed would be capable of public display of information at a scale appropriate to that of a particular center.

Like the Exposition itself, sub-centers are planned for continuing use as a new kind of urban social element. City or Community Rooms, as they might be called, would serve the long range function of international, national, regional, metropolitan or community civic centers. In addition to their primary communication function, these centers could incorporate a range of optional re-use functions dependent on the needs of a particular city or community.

VA The design of the New Community has three primary objectives. The first and most important is to provide an overall framework for social communication and participation in the community that will accommodate individual needs for identity, ownership and privacy. A second objective, arising from the increase in available leisure time produced by machine technology, is to create a new kind of environment offering increased diversity in opportunity for creative participation. To provide a real alternative to existing modes of urban or suburban living, the New Community must display a new attitude toward the function of the city environment in contrast to the traditional one of practical necessity and expediency. Finally, the New Community should become a regional sub-core and focus for surrounding areas of Boston, the South Shore and future development to the east. The Water Plaza, similar to Kenmore or Harvard Squares, should contain a variety and intensity of activity beyond the needs of its immediate surroundings.

VB The overall plan for the New Community is essentially the same as the Exposition plan. The public framework of circulation, parking, transit and open space systems, institutional and recreational facilities and structural and mechanical systems are retained from the Exposition and modified to meet the different needs of the community. Major changes are the re-arrangements of the floating platforms to accommodate additional housing and a major institution and in the nature and mixture of activities.

The Water Plaza, the focal center, will retain many of the original elements; education centers, auditoriums, theaters and exhibition structures and will gain a diverse mix of shops, offices, stores, cinemas,

restaurants, industries, hotels, apartments, institutions, and recreation facilities. This will be the center of community activity, working, shopping, playing and meeting people.

Exposition housing will be reconverted into 18,300 larger units for permanent use and 8,000 additional units will be constructed on relocated floating platforms. Much of the housing will provide only basic structural, utility and open space systems allowing tenants to complete units according to their individual means or desire. In this way, the framework can provide low income, self help, housing on the one hand and compete with suburban standards on the other. Housing areas will also gain a more diverse mix of supporting elements including: service, commercial, educational and recreational facilities. Thompson Island, with its marinas, recreation facilities and controlled climate dome will remain a primary regional open space.

Provisions for three major regional institutions and related industries will provide an internal economic base and help to shape the quality of life in the community.

Auto circulation for the New Community will, as in the Exposition, be confined to parking garages and transit interchanges at the entrances and in the housing areas. Approximately one third of the storage required for the Exposition can be converted to Community uses because of decreased demand.

Primary mass transit will be retained and extended as future demand develops. The secondary line will be converted to a one-way system to provide continuous internal circulation between transit interchanges, the core and various community facilities, the tertiary system will be discontinued but its hardware will be re-used in the community and Boston to reduce dependence on private auto transportation. Water transportation will be retained as an amenity and a mode appropriate to the needs of the community.

The open space structure will remain and be adapted to the post-exposition use. Different parts of the system will be enjoyed by people from other parts of the city or used by smaller community or neighborhood

groups. Family oriented spaces will also be provided for people to develop as they like.

Environmental Design Components, tested in the Exposition, will be modified and supplemented to meet the needs of the community. Many components expended after the Exposition will be re-used in Boston.

VI Re-Use Potential

Related to the Exposition objective of total re-use and the Urban Laboratory Program to test solutions to urban problems, all components of the Exposition have been designed for prototypical application. Exposition systems, buildings, housing, transportation and environmental components will be re-used in both New Community and Boston.

VII Conclusion

This proposal, above all, provides a framework for achieving different but interdependent objectives. The conceptual framework of a cooperative international search for solutions to man's problems in an urbanized world leads to the strategic and physical framework of the laboratory for urban problems; the working Exposition. This framework is the nucleus for the New Community.

PROGRAM STATISTICS

SITE

Land Area	690 acres
Existing shore land	95
Fill	225
Platforms	130
Floating Platforms	110
Existing Island	130

Access

Vehicular	
Southeast Expressway	(N-S)
Morrissey Boulevard (Improved)	(N-S)
Gallivan Boulevard	" (E-W)
Proposed new road	(E-W)

Mass transit

MBTA, Harvard-Ashmont extention

Water Transport

Downtown, Atlantic Avenue

Airport, East Boston

Railroad terminals, North and South Stations

Entrances

5 Vehicular	45,000 vehicles	100,000 persons/day
3 Mass transit		100,000 persons/day
6 Boat		

EXPOSITION

Land Use

Exhibition	200 acres
Theme	100 acres
Pavilion	100 acres
Amusement	(Included in above)
Administration & Service	" " "
Open Space	280 acres

Thompson Island	130 acres
Pedestrian (Included in Exhibition acres)	95 acres
Road	40 acres
Service	15 acres
Housing 18,300 DU @ 65 DU/acre (aver)	300 acres

Parking	
Core (3 levels/under)	10,000 spaces
Exposition Housing	18,300 spaces

Entrances (Auto, transit and boat except as noted)	
Program Center, Squantum	3 points
Columbia Point	1 point
Quincy	1 "
Thompson Island (boat only)	1 "

Transit	
Primary (MBTA)	40,000 pass./hr. capacity
Secondary	21,000 lin. ft. 60,000 pass./hr. capacity
Tertiary	14,400 lin. ft. 5-10,000 pass./hr. capacity

NEW COMMUNITY

Land Use	
Core (Mixed use)	100 acres
Institutional - Columbia Point	100 "
Housing	
26,100 DU @ 65 DU/ acres (aver.)	391 "
Open Space	289 "
Thompson Island	130 "
Pedestrian	100 "
Road	45 "
Service	15 "
Parking	36,100 spaces
Core (3 levels/under)	10,000 "

Transit

Primary

Secondary

Tertiary

MBTA

21,000 lin. ft. 30,000 pass./hr. capacity

7,000 lin. ft. 5-10,000 " " "

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